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Does intellectual capital disclosure enhance organization governance? evidence from Indonesian biggest companies

Ihyaful Ulum^{1*}, Adhe Try Septerina², Adi Prasetyo³, Nafsiah Mohamed⁴,
Azizah Abdullah⁵

¹²³ University of Muhammadiyah Malang, Indonesia

⁴ Accounting Research Institute (ARI) Universiti Teknologi MARA, Malaysia

⁵ Universiti Teknologi MARA, Malaysia

Abstract

The aim of this study is to get empirical evidence about the effect of intellectual capital disclosure (ICD) on cost of equity capital. The samples of this study are Indonesian public companies which included on the 50 biggest market capitalization on Indonesia Stock Exchange. Four way numerical coding system was used to conduct content analysis in order to identify the intellectual capital disclosure practices based on companies' annual report. Regression analysis under SPSS 21.0 was used to test the hypothesis. The results indicated that intellectual capital disclosure had no significant effect on cost of equity capital. On the other hand, leverage as control variable shows a significant role.

Keywords: Cost of equity capital, content analysis, four way numerical coding system, intellectual capital disclosure.

1. INTRODUCTION

The shift in the economic base of industrial economy which is more dominated by tangible assets, toward knowledge-based economy, requires businessmen to develop the intangible assets they have. In accounting, intangible assets refer to *nonphysical value drivers* or creators of value in an organization which show claim for benefit in the future. *Intellectual capital* (IC) is one of the intangible assets which cover employee skills, good relationship with customer, company's environment, and also management process and technology by the company. IC is a critical resource and a major determinant of competitive excellence, economic success, and the

value creation process in the company (Lev, Cañibano, and Marr 2005).

A further issue is the accounting standard governing the intangible assets (PSAK No.19 Rev 2009) indicates that intangible assets generated internally cannot be fully reflected in the statement of financial position. In fact, all costs incurred to develop intangible assets should normally be directly charged as an expense in the income statement. Hence, the value of assets presented does not represent the reality because the IC value cannot be seen explicitly in the statement of financial position (Lev, Cañibano, and Marr 2005). According to Cheynel (2012), it may cause information asymmetry between the company and users of the financial statement.

Information asymmetry is a condition where a party has information that is known by no other parties that certain consequences will only be known by one party without the knowledge of others who actually also need the information (Nuryatno, Nazir, and Rahmayanti 2007). The information gap between the company and users of financial statement can be bridged by the expansion of public disclosure of information and specific information about the company. According to Schuster and O'Connell (2006), the information gap can be covered up with voluntary disclosure.

Voluntary disclosure is a disclosure outside of required disclosures or information disclosure which beyond the minimum requirements of the prevailing capital market regulations (Nuryatno, Nazir, and Rahmayanti 2007; Nuswandari 2009). The theory which underlines the voluntary disclosure is *signaling theory* (Suwardjono 2006). *Signaling theory* puts forward on how a company should give signals to the financial statement users. This signal is in the form of information about what has been done by the management to realize the owner's expectations.

IC information voluntary disclosure would become a very effective medium for the company in delivering superior quality of signal they have relating to the significant IC ownership to create future wealth (Guthrie and Petty 2000; Ulum 2015b). Management's considerations to disclose information voluntarily are influenced by cost and benefit factors. The management will disclose information voluntarily when the acquired benefits outweigh the costs. The primary benefit earned by the company through voluntary disclosure is the low capital costs (Elliot *et al.*, 1994 in Nuswandari, 2009).

Theoretically, the association between disclosure and company's capital cost is supported by two thrusts. The first thrust states that a wider disclosure, increasing the liquidity of market price that reducing the cost of equity capital either by reducing transaction costs or increasing the demands on company's securities. The second thrust suggests that a wider disclosure, reducing the estimated risks arising from the investors' estimations on asset *return* parameter or payoff distribution. Where there is a great uncertainty about the "real" parameter when the information received by the investors is low (Diamond and Verrecchia 1991; Botosan 1997).

Nuryatno, Nazir, and Rahmayanti (2007) and Diamond and Verrecchia (1991) statet that the voluntary disclosure can reduce information asymmetry occurs between the informed investors and

those less informed. The decreasing of asymmetry can reduce *bid-ask spread* and increase the stock liquidity which are characterized by the high trading volume and the high demand for the company's stock from big investors. By doing so, the capital costs borne by the company can be lowered down. Meanwhile, Schuster and O'Connell (2006) and Cheynel (2012) suggested that investors tend to focus on companies with high level of disclosures in order to reduce their own risks. When investors buy securities with substantial risk, additional return is required to make such investment attractive. The point is, when risk increases, investors will require higher rate of returns due to the uncertainty of risks in their investments (Keown *et al.* 2000). The increase of voluntary disclosure lowers the return rate expected by investors due to the investors' perspectives on the uncertainty are decreasing.

Empirical researches which examine the effect of disclosure in general to the capital cost have been done by many, including Warad and Al-Debi'e (2017), Kaluarachchi (2017), and Lopes and de Alencar (2010). The three studies indicated that the more extensive the disclosure carried out by the company, the lower the capital cost that must be borne by the company. Furthermore, Kothari, Li, and Short (2009) explained that the content of disclosure also affects the company's risks proxied by capital cost, stock return volatility, and dispersion of analysts' prediction. Positive and profitable disclosures are proven to lower down the company risks significantly.

The finding of Mangena, Pike, and Li. (2010) showed that the disclosure of each IC category, i.e. human capital, structural capital, and relational capital have correlation with the capital cost. Similarly, a research by Boujelbene and Affes (2013) has also indicated a negative association between the intellectual capital disclosure and capital cost in companies in France. Hence, this study focuses on disclosure of information on intellectual capital and its effect on the capital cost.

This paper employed content analysis with 'four-way numerical coding system' to identify IC disclosure practices (and then to be indexed) in the annual report of Indonesian public companies. Our hypothesis is: the higher of intellectual capital disclosure index the lowest of cost of equity capital. We use leverage ratio as control variable in out research model.

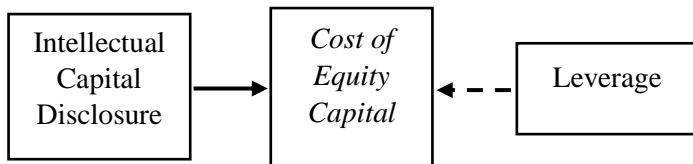


Figure 1. Empirical Research Model

2. METHOD

Population of this research was public companies listed on Indonesia Stock Exchange in 2007-2014. Purposive sampling (Ulum and Juanda 2016) was used to get the samples. These are the criteria : (1) the companies were included in the list of 50 biggest market capitalization of the years 2007-2014; (2) consecutively included in the top 10 of 50 biggest market capitalization during 2007-2014; (3) publish their annual report during 2007-2014 in the IDX website or the company's website.

The independent variable of this research was intellectual capital disclosure (ICD), while the dependent one was cost of equity capital (CoC). ICD was measured by using 36 items of framework constructed by Ulum (2015a). Meanwhile, CoC was calculated by applying Ohlson Model and modified with Random Walk pattern. Leverage is used as a control variable in an empirical research model.

The ICD identification process was done with 4 ways of numerical coding system (*four-way numerical coding system*) as developed by Guthrie et al. (1999). This method did not identify the width of IC disclosure from the quantity aspect only, but also its quality of disclosure. The IC information disclosure in the annual report was weighted according to its projections. The numerical codes used were as follows:

- 0 = item is not disclosed in the annual report;
- 1 = item is disclosed in a narrative form;
- 2 = item is disclosed in numerical form;
- 3 = item is disclosed in monetary value.

If an item is presented in a narrative form but contains elements of numerical and monetary, a score of "3" is granted. Next, index score was made for ICD to bring up one point for each company by multiplying the disclosure score divided by cumulative score (Hooks and Staden 2011):

$$ICD = \frac{\text{Totalscore of disclosure}}{\text{Cumulative score (64)}}$$

The hypothesis test employed regression analysis by utilizing SPSS software version 21 with the following equation:

$$COC = \alpha + \beta_1 ICD + \varepsilon$$

Note:

COC = cost of capital

α = constant

ICD = Intellectual Capital Disclosure

β = coefficient of regression

ε = error

3. FINDING AND DISCUSSION

The average score of ICD variable was 0.5025 or 50.25% with 0.08867 of standard deviation. It shows that the companies included in the 50 *biggest market capitalization* have already had awareness in conducting *intellectual capital* disclosure as proven by half of the overall IC components have been disclosed by the companies. The minimum score of ICD of 0.23 or 23% indicates a company which disclosed less than the others which is Bank Central Asia, Tbk. in 2007.

Whereas, the ICD minimum score of 0.67 or 67% was a disclosure value made by Bank Rakyat Indonesia, Tbk. in 2012. The average of LEV variable was 4.3131 with standard deviation of 3.78749. The score indicates that the company used debt more for financing.

Table 1. Descriptive Statistics

Variable	Minimum	Maximum	Mean	Std. Deviation
ICD	0.23	0.67	0.5025	0.08867
LEV	0.60	10.75	4.3131	3.78749
COEC	-0.96	0.01	-0.6614	0.18980

The minimum score of COEC variable at -96% was the capital cost borne by Unilever Indonesia, Tbk. in 2014. The negative score of equity cost means that the company bore lower capital cost. The maximum score of COEC at 1% which in this research means the capital cost that must be borne by the company was 1% at maximum. It is due to the research samples were companies in the 50 *biggest market capitalization* that do have high stock prices. Hence, in the calculation of capital cost by using Ohlson model, the score obtained was negative.

Content Analysis

Trend of IC information disclosure during the research period (2007-2014) has shown that the

number of human capital item (HC) disclosed was increasing every year from 55% in 2007 to 65% in 2014. Relatively similar result has also found in the component of structural capital (SC) and relational capital (RC). In 2007, the number of SC item disclosed was 72% and reached out 100% in 2013. Meanwhile, the RC component in 2007 was only 66% disclosed and reached out 89% in 2013. However, both components were decreasing at the end of 2014.

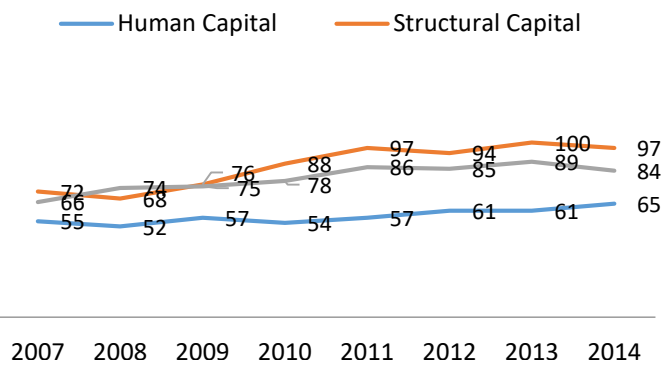


Figure 2. Intellectual capital disclosure trend of Indonesia biggest companies

Hypothesis Test

The result of test with simple regression showed that the score of t-count was -0.415 with sig at 0.680. For the score of $|t\text{-count}| < t\text{-table}$ or significance at $0.680 > 0.05$, it can be concluded that ICD does not significantly influence COEC. Allegedly, the influence absence is due to the samples used here are companies included in the list of 50 *biggest market capitalization*. All the company samples are those which are categorized as *Big Capitalization* or top companies because the companies possess a market capitalization of above 5 trillion rupiahs. The average value of market capitalization owned by the companies for 8 years is 156 trillion rupiahs. According to Kothari, Li, and Short (2009), a company with a large capitalization value can be classified as a big company.

The sample of companies used in this research possesses low capital costs. Botosan (1997) and Orens, Aerts, and Lybaert (2009) suggested that big companies tend to possess low capital costs as shown by the negative score of the calculation result. There is only one company which has positive score of capital cost at 1% that is Astra Internasional Tbk. in 2008. However, the main cause of the low capital cost is not due to the extension of IC disclosure, but the stock price which is high and bigger than the book value of company.

IC disclosure does not really give a significant effect, as since the beginning, those companies have

disclosed much amount of information to attract investors in buying their stocks. The high interest of investors resulting in the high demand for the company's stocks that triggers the liquidity of stock market, as a result, the capital cost borne by is negative or low (Diamond and Verrecchia 1991). So, for the sample companies classified as big companies, the availability of new information addition will not have much effect on the investors' confidence towards the companies (Kothari, Li, and Short 2009).

The Analysis with Control Variable

A further analysis was carried out by adding Leverage variable as control variable in this research model. The result is consistent with the previous testing that the ICD does not affect the COEC ($t = -0.023$; sig= 0.981). Meanwhile, the control variable (Leverage) has a t-count of 2.482 with 0.016 of significance. It means that the leverage affects the COEC: the higher Leverage, the capital cost (COEC) which must be borne by the company will be higher also. The score of R Square between Leverage against COEC is 0.106. It indicates that the variation of COEC is affected by Leverage at 10.6%, while the remaining 89.4% is affected by other variables.

Based on the leverage calculation, companies have total debts that are higher than the total equity. It resulted in the level of leverage generated becomes lower. A lower level of leverage will attract investors because it removes the uncertainty about the company's prospect that eventually will lower down the level of required return, thus, reduce the capital cost borne by the company. These results are in consistent with a research which has been done by Boujelbene and Affes (2013).

4. CONCLUSION

Logically, extension of information disclosed by companies will reduced information asymmetry. The less the degree of asymmetry of information would make the cost of capital becomes cheaper. But, based on this findings, it can be concluded that the IC disclosure does not significantly affect on cost of equity capital for companies classified as big and have value of market capitalization above Rp. 5 trillion. The low capital costs borne by those companies are due to the high interests of investors to the companies' stocks. Thus, the extension of information will not change the investors' confidence towards the companies.

The result of test with the additional of leverage as a control variable shows a significant effect of leverage on the cost of equity capital. The low level of leverage eliminates uncertainty about the future of the companies that makes investors lower

down their required rate of return and makes the capital cost borne by the companies is also decreasing.

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Ulum, Ihyaul

Universitas Muhammadiyah Malang, Malang,
Indonesia

Author ID: 57191663625

Other name formats: Ulum, Ilhyaul

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